

Appl. No. 10/696,917

Amdt. Dated September 15, 2005

Reply to Office Action of July 27, 2005

REMARKS

This is a full and timely response to the non-final Office action mailed July 27, 2005. Reexamination and reconsideration in view of the foregoing amendments and following remarks is respectfully solicited.

Claims 1-20 are pending in this application, with Claims 1, 12, and 17 being the independent claims. Claims 1 and 12 have been amended. Claim 6 has been cancelled. No new matter is believed to have been added.

Rejections Under 35 U.S.C. § 102

The Examiner rejected claim 17 under 35 U.S.C. §102(b) as being anticipated by Kadwell.

Claim 17 includes an emitter for emitting light along a path to a monitor and a receiver to detect light scattered by smoke between the emitter and the monitor. Specifically, claim 17 includes the limitations "a first emitter, positioned in the chamber, for emitting light along a path," "a first monitor detector, positioned along the path of the emitted light, for receiving the emitting light from the first emitter," and "a first receive detector, positioned off the path of the emitted light, for receiving a portion of the emitted light when smoke passes between the first emitter and the first monitor detector, causing the emitted light to scatter and for transmitting a first smoke alarm signal to the central processing unit."

Kadwell does not disclose an emitter for emitting light along a path to a monitor and a receiver to detect light scattered by smoke between the emitter and the monitor. Kadwell discloses a smoke detector including a housing defining a dark chamber admitting test atmosphere with a light receiver disposed therein (Abstract). A scatter emitter is positioned within the chamber such that light strikes the receiver when reflected off particles suspended in the test atmosphere (Abstract). Figure 10 is a schematic diagram of an embodiment of a dual receiver smoke detector. The second receiver 140 is positioned such that light 142 from the obscuration emitter 38 travels along an isolated path different from light 40. The isolated path is free from smoke in the test atmosphere

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24. (column 13, lines 55-60) This may be accomplished by producing a sealed cavity in the housing 144 between the obscuration emitter 38 and the receiver 140 by inserting a light pipe between the obscuration emitter 38 and the receiver 140. (column 13, lines 61-63) Therefore, the second receiver in Kadwell is positioned specifically so that the path the light takes from the emitter into the second receiver is free from smoke. Therefore, the light that travels between the emitter and the second receiver cannot be scattered by any smoke within the test atmosphere. Specifically, Kadwell does not disclose an emitter for emitting light along a path to a monitor and a receiver to detect light scattered by smoke between the emitter and the monitor.

Therefore, claim 17 is not anticipated by Kadwell because claim 17 includes a limitation that is not disclosed in Kadwell.

Applicant, accordingly, respectfully requests withdrawal of the rejections of claim 17 under 35 U.S.C. §102(b) as being anticipated by Kadwell.

Rejections Under 35 U.S.C. § 103

The Examiner has rejected claims 1-16 and 19-20 under 35 U.S.C. §103(a) as being unpatentable over Kadwell in view of Solomon.

Claims 1 and 12 have been amended to include emitting light through air or smoke to a monitor and detecting a portion of the light scattered by the air or smoke with a receiver. Specifically, claim 1 includes the limitation "emitting a first infrared light beam from a primary emitter through at least one of air and smoke to a primary monitor detector" and "detecting a portion of the first infrared light beam scattered by the at least one of air and smoke with a primary receive detector." Claim 12 includes the limitations "transmitting light from the first emitter through at least one of air and smoke to a first monitor detector" and "receiving a first portion of the light using a first receive detector, the first portion of the light having been scattered by the at least one of air and smoke."

As previously mentioned, Kadwell does not disclose emitting light along a path to a monitor and receiving a portion of the light scattered by a portion of the smoke between the emitter and the monitor. In Kadwell, the light which is transmitted between the

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emitter 38 and the second receiver 140 follows an isolated path that is free from smoke in a test atmosphere. Therefore, a light which is transmitted from the emitter to the first receiver follows a different path than the light transmitted by the emitter and captured by the second receiver. Specifically, Kadwell does not teach or suggest emitting light through air or smoke to a monitor and detecting a portion of the light scattered by the light by air and smoke through a receiver.

Solomon teaches a combination optical and ionization detector for providing a more complete range of detection including detection of larger particles of combustion and smaller sub-micron particulates (Abstract). The combination detector includes an optical detector having a pulse generator 10 and an optical transmitting transducer 12, as illustrated in Figure 1A. The optical detector also includes an optical receiver transducer 14, and amplifier 16, and a filter 18. Solomon makes no mention of detecting light scattered off of smoke after being emitted to a monitor.

Specifically, Kadwell and Solomon do not teach or suggest emitting light through air or smoke to a monitor and detecting a portion of the light scattered by the air or smoke with a receiver.

Therefore, claims 1 and 12 are patentable over Kadwell in view of Solomon because claims 1 and 12 include limitations that are not taught or suggested by Kadwell and Solomon.

Claims 2-5, 7-11, 13-16, and 19-20 are dependent on either claim 1, claim 12, or claim 17 and should be allowable for at least the same reasons as claims 1, 12, and 17 stated above.

Claim 6 has been cancelled.

Applicant, accordingly, respectfully requests the withdrawal of the rejections of claims 1-5, 7-16, and 19-20 under 35 U.S.C. §103(a) as being unpatentable over Kadwell in view of Solomon.

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Conclusion

Based on the above, independent Claims 1, 2, and 12 are patentable over the citations of record. The dependent claims are also submitted to be patentable for the reasons given above with respect to the independent claims and because each recite features which are patentable in its own right. Individual consideration of the dependent claims is respectfully solicited.

The other art of record is also not understood to disclose or suggest the inventive concept of the present invention as defined by the claims.

Hence, Applicant submits that the present application is in condition for allowance. Favorable reconsideration and withdrawal of the objections and rejections set forth in the above-noted Office Action, and an early Notice of Allowance are requested.

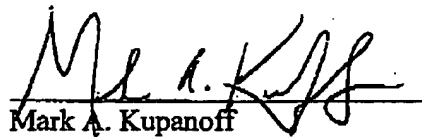
If the Examiner has any comments or suggestions that could place this application in even better form, the Examiner is requested to telephone the undersigned attorney at the below-listed number.

If for some reason Applicant has not paid a sufficient fee for this response, please consider this as authorization to charge Ingrassia, Fisher & Lorenz, Deposit Account No. 50-2091 for any fee which may be due.

Respectfully submitted,

INGRASSIA FISHER & LORENZ

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